SYSTEM AND METHOD FOR DYNAMI-CALLY EXECUTING A FUNCTIONIN A PROGRAMMABLE LOGIC ARRAY

Abstract

A reconfigurable logic array (RLA) system (104) that includes an RLA (108) and a programmer (112) for reprogramming the RLA on a cyclical basis. A function (F) requiring a larger amount of logic than contained in the RLA is partitioned into multiple functional blocks (FB1, FB2, FB3). The programmer contains software (144) that partitions the RLA into a function region FR located between two storage regions SR1, SR2. The programmer then programs functional region sequentially with the functional blocks of the function so that the functional blocks process in alternating directions between the storage regions. While the programmer is re-configuring function region with the next functional block and re-configuring one of the storage regions for receiving the output of the next functional block, data being passed from the current functional block to the next functional block is held in the other storage region.